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NEW PLACER FIELD

Located in the Future Sacramento
Valley of Sonora.

The Yaqui river delta of central Sonora possesses a climate, a soil, a topography and mineral resources in many respects so similar to the great central basin of northern California as to justify a close comparison in all respects except dimensions. Even its geological origin will be found to contain close analogies.

Aside from its conceded fertility and the magnitude of its harvest of cereals, etc., all of which can also be produced on the Yaqui, the Sacramento Valley of California possesses a unique and special interest for practical miners, just now, in the extent of its modern gold-placer operations conducted on one of its affluents above Marysville, and between that town and Oroville, some twenty-five miles to the northeast of the first named city. Instead of placer washing by ordinary hydraulic methods, the operations are carried on by gigantic dredges, each machine costing from \$40,000 to \$50,000. These excavate the bars and river shore-lines on the Yuba, tributary of the Sacramento river. The contents of their revolving scoops of steel are subjected to scientific scrutiny and when all "free gold" has been withdrawn the gravel is again deposited once more along the banks.

These gravel banks are literally natural treasure vaults, for so sure are the operators in question of obtaining a certain amount of "pay dirt" of every cubic yard, that they unhesitatingly purchase orchards, houses, or unoccupied farm land along their route for the purpose of not merely prospecting, but to obtain the certain known dividend on their investment. So far there has been no disappointment in these estimates, though the writer could not help sympathizing with some of the good townspeople of Oroville, who regretted the disappearance of a beautiful matured olive orchard located on a high bluff, overlooking their charming town from the opposite bank, which was about to disappear in the capacious mouth of the dredge. The roots of the olives were known for a certainty to be entwined around the grains of auriferous sands.

As one traces the successive affluents of the Yaqui river, back till one reaches the mineralized area of Southern Arizona and New Mexico, thence across the foothill ranges of the northeastern sierras of Sonora, thence up into the lofty regions of the Sierra Nevadas of the Pacific slope of Chihuahua, one wonders what its mighty June floods will contain. Between Tombstone, Arizona, and Batopilas, Chihuahua, is a fairly good stretch. It is not too much to say that it covers one of the most highly mineralized regions on the Pacific slope, between Sitka and Salinas Cruz; and so far as Mexico is concerned the Yaqui river and its affluents are on visiting terms with the entire area and its every nook and corner.

It is at Suaqui that the Rio Fronteras, Moctezuma, Rio Bavispe and Rio Aros unite and become the Yaqui. But before reaching there they have visited whole kingdoms of mineral wealth on their own separate tours of the vast principalities behind them.

The agriculturist of the Yaqui valley ascertained centuries ago that its silt contained all the fertilizing elements of the far-famed Nile floods, and in abundance. But the scientific miner and the capitalist of today have yet to inform us what other ingredients do the great flood-tide of the Yaqui, now pouring down from yonder mountain fastness, contain in its deep currents, setting so strongly toward the Gulf of California waters. Gold, Copper, Silver, Lead, Iron, Gypsum and Coal, are known to be present and all have been mined with success at some point within the compass of the Yaqui river or its feeders. Gold is perhaps among the easiest metals to desintegrate, or seemingly so. But copper has been known at given points in Arizona to be in such fluid condition that tin cans exposed to the flowing water containing the copper solution have become so completely altered as to practically constitute pure copper. Water, carrying gold in solution from gold-producing stratas above, is fortunately, the most common and most popular mining procedure.

The history of the entire mining areas in which the tributaries of the Yaqui take their rise, as well as the Yaqui Delta itself, would seem to justify the conclusion that exploration and development should disclose comparatively large gold-bearing areas in that region. Nor would it be any surprise to those familiar with the mineralized region here referred to, and also those of the Sacramento valley mentioned at the head of this article, if the western Yaqui Delta itself should disclose free gold deposits, under intelligent exploration, and particularly so under dredge operations. The river bottom below Los Hornos, i. e., below the foot hill belt, is accessible for such explorations at least six to nine months in the year. Important pointers should be available by this time regarding placer-washing in general at Cumuripa, some seventy-five miles from Torin, the latter the leading commercial centre of the Yaqui valley. The parties operating at Cumuripa are Americans. It is known that they inaugurated work by starting up "dry-washers," which they subsequently abandoned for regular hydraulic methods. But very little authentic news is however available from there, which scarcity, sometimes at least, implies that those in on the "ground floor" have a good thing. What is required, however, to determine the availability of the lower Yaqui river banks for gold dredging operations, is systematized "panning" from surface to bed rock wherever available, or the sinking of shafts or testing-holes for given distances from five to twenty miles. Such tests would speedily determine whether or not the river bed or its immediate em-

bankments, afford sufficient inducement for the requisite capital necessary to introduce dredges.

Those used at Oroville, California, are manufactured in San Francisco under first class auspices. They vary in cost from \$35,000 up to \$50,000 in gold, according to size and pattern. That the investments in question have more than justified themselves, is amply proved by the fact that starting with but one dredge, some few years ago, there are now twenty-five in actual operation.

The feasibility from a business point of view, has been established by practical and thorough preliminary tests, in the Yaqui Valley. The machinery, etc. of the dredges can be forwarded by direct steamer or rail from San Francisco to Guaymas, from which the Yaqui is distant only thirty miles by water. The dredges could be set up at the mouth of the Yaqui on the gulf of California and during the period of high water easily floated to their destination at any point forty to fifty miles inland. Probably Torin or the vicinity of Torin would afford as good preliminary starting points as any.

So much for the possible placer fields of the Yaqui Delta; as regards quartz or lode mining it becomes a different problem entirely. Frequent reference is made to mining operations in the Yaqui Valley, while as a matter of fact the "open Yaqui Delta" is as yet not the scene of any great mining operations at all. The term Yaqui Valley has become a convenient synonym for various localities in which mining operations are carried on, located on the respective tributaries of, or generally above the junction point of the Yaqui. This is some ten odd miles below Suaqui, district of Ures. At this place the Yaqui receives the waters of the Rio Moctezuma and the Rio Bavispe which have previously been reinforced with their own numerous tributaries already referred to. The elevation here is about 1150 feet, at a distance from the mouth of approximately 200 miles. The proper starting point for these upper regions on the Yaqui river, when the traveller is once in the Yaqui Valley proper, is Cocorit, some seventy-five miles from the gulf, where the guides and needed camping outfit (except tents) may be obtained. The Guaymas stage passes this point daily to and from Alamos. Cumuripa, the aforesaid placer mining center, is some sixty odd miles from Cocorit, where the Yaqui river is reinforced by the Rio Tecoripa. The best known mining areas further up on the Yaqui some seventy miles distant is "La Dura," chiefly gold mining and operated by the Americans. But the placer mining areas originally referred to as well worth a trial experiment, are in the delta of the west or the unobstructed Pacific side of the last stronghold of mountain and foot hills. Like their corresponding gold areas in the Sacramento Valley, these will, in a measure at least, if found at all, be located prospectively directly between fields and orchards.

But these aside. At the very confluence of the river and the valley

in its foot hill area proper, there is located a mineral belt which so far as it has been investigated, indicates that it has a distinct future before it.

Leaving Cocorit, thence proceeding but four miles further up the river delta, the traveller at once encounters distinct indications of gold, copper, lead and silver, also iron and carbonates of lead. The latter appear to constitute large deposits.

Some twenty miles altogether up the river from Cocorit is Los Hornos. It is an important point in the foot hill belt. First because of the location here of extensive irrigation works such as diversion dams, steel headgates and etc., but what for our immediate purpose is of more importance, very promising silver prospects. This is to the northwest of the irrigation plant and is known as the "Sierra de la Mina." It is the property of an intelligent American, Mr. O. J. Riggs, who has been a resident of the valley for many years.

Experienced miners in this mineralized zone appear to confirm that the regular veins are never encountered here till water level is reached. This would appear an unbroken rule as regards gold deposits. A short distance from "Los Hornos" is a well defined granite formation, carrying heavy but low grade silver ore. A valuable copper area is said to exist on and around the Barranca range. This is on the western flank of the Rio Yaqui, officially in the eastern district of Hermosillo, but within the mining areas here referred to some forty miles above Cocorit. The copper mines are also known as the "Douglas" property.

One of the most experienced miners as well as responsible business men in this region is Don Benito Conant. Together with his brother Don Carlos Conant the town of Cocorit is largely the result of their own labor. American prospectors, investors, or land seekers would consult their own interest by conferring with either of these men. Don Benito Conant has given specific attention to mining in this territory for upwards of twenty years. He has so many "stakes" in the country of his choice, that to wish every legitimate effort for its development, good speed, is but to favor his own interests as well as those of the new comer. Every well disposed American can rest assured of a cordial welcome on the part of the men here referred to. Those who are really desirous of entering this very promising field, yet so little known, and so frequently belied by mere foolish rumors, will do well to write them, also General Lorenzo Torres of Torin.

The territory here outlined constitutes a principality in geographical extent and in latent resources. It is difficult to estimate its future, but it is surely destined to become one of the most productive valleys, as well as one of the most densely populated areas of the entire Pacific coast of Mexico. The miner, the agriculturist, the horticulturist will soon vie with each other as to whom shall occupy its vantage

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